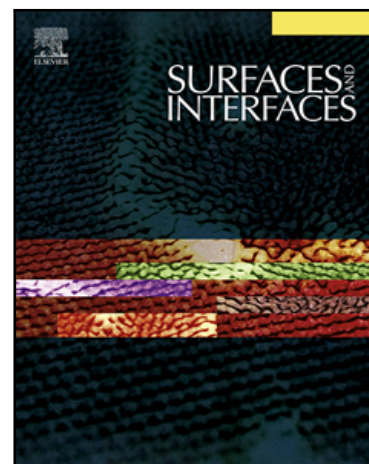


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Sb₂S₃ single crystal nanowires with comparable electrochemical properties as an anode for sodium ion batteries

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Abstract

Single crystal Sb₂S₃ nanowires are synthesized successfully through a simple one-step hydrothermal method. The morphological and structural characterizations reveal the uniform nanowire morphology of single crystal Sb₂S₃ with orthorhombic structure. The Sb₂S₃ nanowires exhibit a relatively high reversible capacity of 579 mAh g⁻¹ at a current density of 100 mA g⁻¹ and good cycling stability with 80.5% capacity retention after 50 cycles. The good rate capability of the Sb₂S₃ nanowires is also demonstrated by discharge/charge tests. The comparative study of electrochemical performance is made for two kinds of electrodes with different conductive additive contents. Sb₂S₃ nanowires electrodes with 20% acetylene black

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